Long-Term Outcomes after Re-entry Device Use for Recanalization of Common Iliac Artery Chronic Total Occlusions

Prio Hossain MPHa, Damianos G. Kokkinidis, MDB, Ryan Cotter, MDB, T. Raymond Foley, MDB, Bejan Alvandi BSA
Gagan D. Singh, MDa, Stephen W. Waldo, MDb, John R. Laird, MDb, Ehrin J. Armstrong, MD MSCb
a University of California, Davis Division of Cardiovascular Medicine and Vascular Center, Sacramento CA
b Division of Cardiology, Denver VA Medical Center, University of Colorado, Denver, CO

BACKGROUND

• Chronic total occlusions (CTOs) comprise up to 20-40% of lesions undergoing treatment for symptomatic peripheral artery disease (PAD).
• Subintimal angioplasty (SIA) is often used to facilitate CTO crossing. However, SIA leads to unpredictable wire re-entry and is not always feasible.
• Re-entry devices (RED) are an alternative treatment option that can increase recanalization success rate and optimize the distal re-entry point while decreasing procedure and fluoroscopy times.

METHODS

• We performed a two-center retrospective study of 115 patients (140 lesions) undergoing CIA CTO endovascular intervention between 2006 and 2016.
• Cox proportional hazard model was developed to determine if RED use was associated with target lesion recanalization (TLR) or major adverse limb events (MALE) within five years.

RESULTS

• There were no significant differences in baseline demographics or other major comorbidities between the two groups (Table 1).
• RED use was safe and not associated with an increase in intraprocedural complications (Table 2).
• RED use had no statistically-significant association with changes in TLR (P = 0.619) and MALE (0.601) rates after five years (Figures 1 and 2).

CONCLUSION

• Our findings indicate that RED does not increase intraprocedural complications or lead to worse long-term outcomes (TLR and MALE).
• Future studies in larger cohorts - directly comparing RED vs. SIA treated cases without RED – may yield more definitive results.

DISCLOSURES

Dr. Laird is a consultant/advisory board member for Abbott Vascular, Bard Peripheral Vascular, Boston Scientific, Medtronic, WL Gore and receives research support from WL Gore, Medtronic, Bard Peripheral Vascular. Dr. Armstrong is a consultant to Abbott Vascular, Boston Scientific, Cardiovascular Systems Incorporated, Medtronic, and Spectranetics.